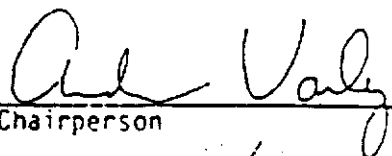
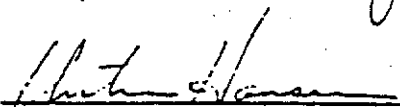
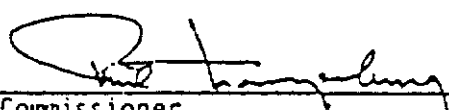


to be contained in the reports will be the subject of a later order, to be issued after Company has discussed the proposed content of the reports with the Operations Review staff.


IOWA STATE COMMERCE COMMISSION


Chairperson


Commissioner


Commissioner

ATTEST:


Executive Secretary

Dated at Des Moines, Iowa, this 10th day of November, 1983.

STATE OF IOWA
BEFORE THE IOWA STATE COMMERCE COMMISSION

IN RE:

IOWA PUBLIC SERVICE COMPANY

DOCKET NO. RPU-83-29

STIPULATION AND AGREEMENT

ARTICLE I

Introduction

On August 16, 1983, Iowa Public Service Company ("Company") filed an application with the Iowa State Commerce Commission ("Commission") for a revision in its rates and charges for electric utility service. The Commission, by order issued September 8, 1983, docketed the matter as Docket RPU-83-29; instituted an investigation of the proposal and fixed a procedural schedule. By order issued October 6, 1983, Iowa Citizens for Community Improvement ("CCI") and Terra Chemicals International, Inc. ("Terra") were granted permission to intervene in the proceeding.

Company was authorized to bill and collect increased rates on an interim basis commencing October 13, 1983, pending hearing and decision.

Hearing on Company's proposal commenced October 13, 1983 at which Company, Terra and the Office of Consumer Advocate ("OCA") were the only parties to enter appearances and actively participate.

ARTICLE II

Purpose

This Stipulation and Agreement has been prepared and executed by Company, Terra and OCA--collectively hereinafter the "Parties" or

"Signatories"--for the purpose of resolving the jurisdictional revenue requirement at Docket No. RPU-83-29.

ARTICLE III

Joint Motion To Commission

Upon execution of this Stipulation, the Signatories shall file the same with the Commission together with a joint motion requesting that the Commission issue an order approving this Stipulation in its entirety without condition or modification.

ARTICLE IV

Condition Precedent

This Stipulation shall not become effective unless and until the Commission issues an order approving the same in its entirety without condition or modification.

ARTICLE V

Privilege And Limitation

This Stipulation shall become binding upon the Signatories upon its execution, provided, however, that if this Stipulation does not become effective in accordance with Article IV, above, it shall be null, void and privileged. This Stipulation is intended to relate only to the specific matters referred to herein and no Signatory waives any claim or right which it may otherwise have with respect to any matter not expressly provided for herein. Except as expressly provided herein at Articles VII, VIII, IX, X, ^{and XII} and XI, no Signatory shall be deemed to have approved, accepted, agreed or consented to any ratemaking principle, any method of cost of service determination, or any method of cost allocation underlying the provisions

of this Stipulation or be prejudiced or bound thereby in any future proceeding before the Commission.

It is expressly understood and agreed by the parties and the Commission that approval of this Stipulation by the Commission under the terms of Article IV hereof means that except for the in futuro ratemaking treatment of excess generating capacity and Federal income taxes under the provisions of Articles VIII and XI, the amortization of unbilled revenues, the sale of oil and non-recurring consultant fees and charges during the respective amortization periods specified in Articles VII, IX and X, and the common stock equity return specified in Article VI, the Commission and the parties cannot use anything contained in this Stipulation as a "principle" for interim rate or any other purpose in future rate proceedings.

ARTICLE VI

Jurisdictional Current Revenue Requirement

A. The rate of return on common stock equity for the purposes of determining revenue requirement shall be 14.35 percent. The average cost of capital for the purposes of determining revenue requirement shall be 10.827 percent, as computed in Appendix A attached to this Stipulation and, by this reference made a part hereof.

B. The electric jurisdictional revenue requirement (except for the provisions of Articles VIII and XI of this Stipulation) for the purpose of setting current rates to be used in making refunds, shall be \$223,359,649, as computed in Appendix A attached to this Stipulation.

ARTICLE VII

Ratemaking Treatment Of Unbilled Revenues

In 1982 the Commission approved a Stipulation and authorized Company to change the method of accounting for unbilled revenues. The Company changed its accounting method in 1981 and, in conformance with accounting conventions, booked the unbilled revenues in the first quarter of 1982. The amount of unbilled electric revenues booked by Company was \$8,218,340. The parties agree that for ratemaking purposes the \$8,218,340 of unbilled electric revenues shall be amortized "above-the-line" as credits to revenue in computing the revenue requirement in Appendix A appended hereto over a ten (10) year period; such amortization period for ratemaking purposes is to commence when the current rates determined under this Stipulation are placed in effect, however, for book purposes only Company may commence the amortization of unbilled revenues as of January 1, 1982.

ARTICLE VIII

Excess Generating Capacity

Current jurisdictional rates to be used in making refunds shall be calculated on the basis of the adjustment for excess generating capacity as contained in Appendix A appended to this Stipulation and reflected in the computation of revenue requirement in Appendix A appended to this Stipulation.

In the event that the Commission or the highest court that rules on the issue determines in any proceeding commenced before the Commission in 1983 that it is proper to fix rates on any of the following basis:

- (a) the position of OCA that rates fixed on a 1982 test year should not contain or recognize costs (both investment and operating) or revenues associated with Louisa Generating Station, or
- (b) that the generating capacity reserve margin used to compute an excess generating capacity adjustment is less than 25 percent, or
- (c) that an excess capacity adjustment should be calculated on the basis of the costs of specific generating units,

the parties agree to be bound thereby and Company agrees to make further refunds, measured commencing October 13, 1983, in accordance with such determination together with interest at the rate, calculated under the provisions of Section 23, House File 312, 70th G. A. on October 13, 1983. For purposes of making any adjustment under subsection "c", above, the adjustment shall be computed by first exhausting Company's proportional share of the Louisa Generating Station, then by exhausting Company's proportional share of the Ottumwa Generating Station, then by exhausting Company's proportional share of the Neal Generating Station, Unit #4, then, if required, by exhausting, successively, Company's proportional shares of the remaining units of the Neal Generating Station. At any point, if the remainder of the excess capacity adjustment is less than Company's proportional share in a generating station or a unit thereof, such remainder shall be calculated using the average net investment in generating stations or units thereof which have not been exhausted in computing the adjustment.

In the event the utility position prevails before the highest court which hears the issue, Company shall be permitted to apply the ruling of the highest court on this issue in prospective rate cases only without

recoupment of revenues for the period intervening until a ruling is received from the highest court reviewing the matter.

It is expressly understood that the parties do not waive any of their rights of participation in any judicial review proceeding involving the issue of excess generating capacity by reason or under the terms and provisions of this Article.

ARTICLE IX

Amortization Of Gain On Sale Of Oil Stocks

During the test period Company realized a \$967,398 gain on sale of part of its oil stock. The parties agree that for ratemaking purposes the \$967,398 gain shall be amortized "above-the-line" as credits to revenue in computing the revenue requirement in Appendix A hereto over a three (3) year period, such amortization period for ratemaking purposes is to commence when the current rates determined under this Stipulation are placed in effect, however, for book purposes only Company may commence the amortization of the gain on sale of oil stocks as of January 1, 1982.

ARTICLE X

Amortization Of Consultants Fees

During the 1982 test year Company expended \$125,396 as fees to consultants for studies relating to requirements imposed by the Public Utility Regulatory Policy Act. The parties agree that such expenditures shall be amortized "above-the-line" as expenses in computing the revenue requirement in Appendix A hereto over a two (2) year period, such amortization period to commence for ratemaking purposes when the current rates determined under this Stipulation are placed in effect, however, for book

the flow-through method of accounting and flowed back more rapidly than the remaining lives of the associated assets.

It is expressly understood that the parties do not waive any of their rights of participation in any judicial review proceeding involving the issue of method for calculating deferred Federal income taxes.

ARTICLE XII

Rate Design

Rates to recover the revenue requirement contained in this Stipulation shall be designed by applying a uniform percentage of increase to all classes of customers.

The parties affirm that the goal of future electric rate proceedings shall be to design rates, to the maximum extent practical, to reasonably reflect costs of providing electric service to each customer class as required by Docket RMU-80-1 and Rule 250--20.10(2). To that end as part of its next rate case proceeding Company agrees to prepare a cost to serve study for rate design purposes. The Company will base such study on a test period selected by the Company for such rate case filing. As part of such cost to serve study Company shall likewise review the propriety of the existing categories of customer classes and shall recommend disaggregation or recombination of existing customer classes, if appropriate, to establish classes based upon reasonably similar usage, load and cost characteristics. No party waives any right to challenge the validity of any cost to serve study so filed by the Company or to challenge the validity of the test year selected by Company for the entire rate filing.

ARTICLE XIII

Tariff Sheets And Refund Plan

A. Upon approval of this Stipulation, the Company will file, subject to check by the Commission Staff and OCA and approval by the Commission, if necessary, tariff sheets with the Commission reflecting rate levels determined by this Stipulation.

B. Within ninety (90) days following approval of this Stipulation, the Company will commence refunds, including associated sales taxes and gross receipts taxes when applicable and interest, due its customers in accordance with the following provisions:

1. Refunds will be made to those customers who paid for their electric service at the higher rates for the period beginning with usage after October 13, 1983, until implementation of revised rates in this docket.

2. Refunds will be the difference between the new tariff rates and those rates actually in effect during the refund period.

3. Interest will be calculated at the rate determined under the provisions of Section 23, House File 312, 70th G.A. as of October 13, 1983.

4. Sales tax and gross receipts tax will be included in refunds, if applicable.

5. Customers presently receiving service will be refunded with a credit on their next bill.

6. For those customers eligible for a refund who are no longer receiving electric service, refund will be made by check mailed to the last known address except for those customers that have an unpaid account the refund will be credited to the account. No checks under \$1.00 will be issued unless requested by the customer.

7. Unrefunded amounts, which include amounts under \$1.00 and undeliverable checks, will be retained in a miscellaneous current and accrued liability account and such account balance shall be deducted in computing rate base in future rate proceedings until such time as the amounts escheat in accordance with the laws of Iowa.

IOWA PUBLIC SERVICE COMPANY

By 

Dated this 26th day of October, 1983.

TERRA CHEMICALS INTERNATIONAL, INC.

By 

Dated this 26th day of October, 1983.

OFFICE OF CONSUMER ADVOCATE

By 

Dated this 26th day of October, 1983.

ISCC DOCKET NO. RPU-83-29
STIPULATION

RATE OF RETURN

	<u>Amount</u>	<u>Ratio</u>	<u>Cost</u>	<u>Weighted Cost</u>
Long-term Debt	\$333,487,178	52.704%	9.081%	4.786%
Preferred Equity	73,343,008	11.591	7.913	.917
Common Equity	225,927,273	35.705	14.35	5.124
		<u>100</u> %		<u>10.827%</u>

REVENUE REQUIREMENT

Average Rate Base	\$563,257,132
Rate of Return	10.827%
Income Requirements	60,983,850
Less Actual Income	48,794,218
Income Deficiency	12,189,632
Income Tax @ 51.13%	12,753,343
Revenue Deficiency	24,942,975
Less Capacity Adjustment	(6,912,498)
Adjusted Revenue Deficiency	\$ 18,030,477

IOWA PUBLIC SERVICE COMPANY
Electric Income Statement
(000)

Operating Revenues	\$223,359,649
Operating Expenses:	
Oper & Maintenance	\$ 98,364,661
Depreciation and Amortization	24,933,782
Taxes Other Than Income	13,423,952
Income Taxes	
Federal - Current	11,077,133
State - Current	5,113,590
Deferred Taxes	7,550,551
Investment Tax Credit	5,290,268
Total Operating Expenses	<u>\$165,753,937</u>
Operating Income	\$ 57,605,712

ISCC DOCKET NO. RPU-83-29
STIPULATION

Appendix "A"
Page 4 of 4

EXCESS CAPACITY ADJUSTMENT - CURRENT RATES

1983 Total Company System Peak	827	MW	
Iowa Jurisdictional Allocation	x .953131		
Iowa Jurisdictional 1983 System Peak	<u>788.2</u>	MW	
Multiplier	x 1.25		
MW Iowa Capacity Requirement			985.3 MW
MW Total System Available (Staff)	1287.3	MW	
Less: MW Esterville and Maynard Plant	- 34.0	MW	
MW Total System Less Esterville & Maynard	<u>1253.3</u>	MW	
Iowa Jurisdictional allocation	x .953131		
MW Iowa Only Less Esterville and Maynard			- 1,194.6 MW
MW Iowa Excess Capacity			209.3 MW
Divided by MW Iowa Only Less Esterville and Maynard			<u>= 1,194.6 MW</u>
Computer Factor	.17521		
Iowa Jurisdictional Generating Plant Investment	x \$376,278,481		
	<u>\$ 65,927,753</u>		
Weighted Cost of Common Equity	x .05124		
	<u>\$ 3,378,138</u>		
Tax @ 51.13%	\$ 3,534,360		
Revenue Adjustment	<u><u>\$ 6,912,498</u></u>		

STATE OF IOWA
IOWA STATE COMMERCE COMMISSION

IN RE:

IOWA PUBLIC SERVICE COMPANY

DOCKET NO. RPU-83-29

ORDER APPROVING STIPULATION AND AGREEMENT

(Issued November 10, 1983)

On August 16, 1983, Iowa Public Service Company (Company) filed tariffs identified as TF-83-426 and TF-83-427, for a revision in its rates and charges for electric utility service. These tariffs were docketed by Commission order of September 8, 1983. On October 6, 1983, Iowa Citizens for Community Improvement (CCI) and Terra Chemicals International, Inc. (Terra) were granted intervenor status in the proceeding. On October 7, 1983, the Commission authorized the Company to bill and collect increased rates on an interim basis commencing October 13, pending hearing and decision. On October 17 the Office of Consumer Advocate (OCA) filed an application for rehearing concerning the interim rates. On October 26, Company, OCA, and Terra filed a proposed stipulation and agreement for the approval of the Commission. The proposed stipulation and agreement will be approved.

A part of Company's evidence in this rate case was a cost-of-service study. If the results of this study were applied to Company's rates, certain classes would be subject to a greater percentage increase than

certain other classes. Under Article 12 of the stipulation, a uniform increase will be applied to all classes, and Company is to prepare another cost-of-service study as part of its next rate case. The Commission directs Company to file the cost-of-service study on or before July 1, 1984, with tariffs setting out a rate structure based on the results of the study, if that rate structure would be different than the rates then in effect.

Company is directed to file quarterly reports, beginning January 1, 1984, concerning the efficiency of Company's management. The information to be contained in the reports will be the subject of a later order, to be issued after Company has discussed the matter with the Operations Review Division staff.

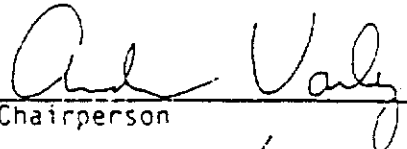
Finally, the Commission finds that the application for rehearing filed on October 17, 1983, by OCA is rendered moot by the provisions of the stipulation.

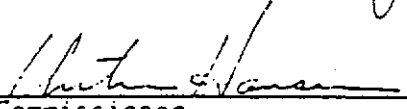
IT IS THEREFORE ORDERED:

1. The proposed stipulation and agreement filed by Company, Terra and OCA in Docket No. RPU-83-29 is approved.
2. Company is directed to file a current cost-of-service study on or before July 1, 1984, along with tariffs supporting a rate structure based on the results of that study, if such a rate structure would be different than the rates then in effect. This proceeding will be docketed as a matter separate from Docket No. RPU-83-29.
3. Company is directed to file quarterly reports beginning January 1, 1984, concerning the management efficiency of the Company. The information


to be contained in the reports will be the subject of a later order, to be issued after Company has discussed the proposed content of the reports with the Operations Review staff.

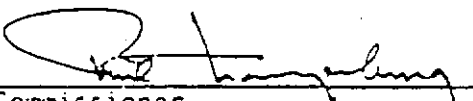
IOWA STATE COMMERCE COMMISSION


Chairperson


Commissioner

ATTEST:


Executive Secretary


Commissioner

Dated at Des Moines, Iowa, this 10th day of November, 1983.

DOCKET NO. RPU-90-6

MIDWEST GAS

The Natural Gas Utility Division of
Iowa Public Service Company

Docket No. RPU-90-6

Direct Testimony

of

Paul R. Moul, Senior Vice President
AUS Consultants - Utility Services Group

Concerning

Cost Rate of Common Equity
and
Overall Fair Rate of Return

Midwest Gas

Table of Contents
to the Direct Testimony of Paul R. Moul

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Appendix C - Risk Premium Approach	
Appendix D - Discounted Cash Flow Approach	

DIRECT TESTIMONY OF PAUL R. MOUL

Introduction and Summary of Findings

Q. Please state your name, occupation and business address.

A. My name is Paul R. Moul. My business address is 155 Gaither Drive, Mount Laurel, New Jersey, and my mailing address is P.O. Box 650, Moorestown, NJ 08057. I am a Senior Vice President of AUS Consultants - Utility Services Group. AUS Consultants is an independent, nationally recognized consulting firm comprised of the Utility Services Group, including the Weber Fick and Wilson Division, Valuation Services Group, Industry Analysis Group, Software Group, ICR Survey Research Group and C.A. Turner Utility Reports. The Utility Services Group specializes in fair rate of return studies, arranges for private placement of public utility securities, and provides a wide range of public utility ratemaking services, which include accounting, cash working capital, cost of service, tariff design, and depreciation. My educational background, business experience and qualifications are provided in Appendix A, which follows my direct testimony.

Q. What is the purpose of your testimony?

A. My testimony presents evidence, an analysis and a recommendation concerning the appropriate cost rate of common equity and overall fair rate of return that the Iowa Utilities Board ("IUB" or the "Board") should allow the "Midwest Gas" division (the "Company") of Iowa Public Service Company ("IPS"). Additional evidence, in the form of appendices, follows my direct testimony. My analysis and recommendation are supported by the detailed financial data that is contained in Exhibit No. ____, which consists of fifteen (15) schedules.

DIRECT TESTIMONY OF PAUL R. MOUL

1 Q. Based upon your analysis, what is your conclusion concerning the Compa-
2 ny's fair rate of return?

3 A. My conclusion is that the Company should be afforded an opportunity to
4 earn an overall fair rate of return of 10.702% which includes a 13.68%
5 cost rate of common equity. The 10.702% overall fair rate of return is
6 based upon the weighted average cost of capital approach which provides
7 a means to apportion the Company's return to each class of investors.
8 The calculation of the weighted average cost of capital requires the
9 selection of appropriate capital structure ratios and a determination of
10 the cost rate for each capital component. The determination of appro-
11 priate capital structure ratios and embedded senior capital cost rates
12 are set forth in the testimony of Mr. Timothy Mussehl, a Company wit-
13 ness. I will incorporate his recommendations into my overall fair rate
14 of return for Midwest Gas. The resulting overall fair rate of return is
15 the product of weighting the individual capital cost rates by the pro-
16 portion of each respective type of capital. The overall fair rate of
17 return, when applied to the Company's rate base, will provide a level of
18 return which will compensate investors for the use of their capital.

19 Q. How have you determined the common equity return component of the Compa-
20 ny's fair rate of return?

21 A. In arriving at my recommended 13.68% common equity cost rate, I have
22 employed two commonly used models: the Risk Premium approach, which
23 recognizes the greater risk of common equity over that of long-term
24 debt, and the Discounted Cash Flow analysis. Since there is no market
25 for the Company's common stock, my DCF analysis is based upon the

1 market-determined cost rate for a Barometer Group of Six Gas Distribu-
2 tion Companies (the "Gas Barometer Group") and also a Barometer Group of
3 Eleven Combination Gas and Electric Companies (the "Combination Barome-
4 ter Group"). It is my opinion that by considering the results of both
5 Barometer Groups, a conservative measure of the cost of equity for Mid-
6 west Gas is provided. My analysis of Midwest Energy Company ("MWE" or
7 the "Holding Company"), the parent company of IPS, indicates that the
8 MWE market data is unsuitable to measure the cost of equity for Midwest
9 Gas. As a consequence, it is my opinion that the Gas Barometer Group
10 and Combination Barometer Group provide the best basis to measure the
11 Company's cost of equity.

12 I tested my overall rate of return recommendation by reference to
13 fixed charge coverage in order to satisfy the capital attraction and
14 maintenance of credit standards of a fair rate of return. It is impor-
15 tant that the Board provide the Company with an opportunity to experi-
16 ence an adequate level of pre-tax interest coverage so that the Compa-
17 ny's creditworthiness is not impaired and is commensurate with its pub-
18 lic service obligation.

19 Rate Setting Principles

20 Q. What accepted regulatory principles govern the determination of a fair
21 rate of return on common equity?

22 A. Insofar as tariffed rates are concerned, the Board serves as a substi-
23 tute for competition and sets the price for service. In setting the
24 price, the Board must carefully weigh the public's interest in reasona-
25 bly priced, but safe and reliable service. While the price must take

DIRECT TESTIMONY OF PAUL R. MOUL

		DCF Result	+	Financial Risk Adjustment	-	Required Cost Rate
3	Gas Barometer Group	12.6%	+	0.5%	-	13.1%
4	Combination					
5	Barometer Group	12.0%	+	0.4%	-	12.4%

It is important to reiterate that a financial risk adjustment must be reflected in the equity cost rate for Midwest Gas because to fail to do so would seriously understate the Company's required return when using the Gas Barometer Group and Combination Barometer Group as a proxy. As my conclusion using the DCF approach for the Barometer Groups, I gave equal weight to both cost rates, after a financial risk adjustment. This provides a 12.75% $(13.1\% + 12.4\% = 25.5\% \div 2)$ result for Midwest Gas.

Appropriate Rate of Return on Equity

Q. You stated earlier that an equity return of 13.68% would be appropriate based on your analysis of the Barometer Groups. What is the basis of your recommendation?

A. My recommendation is based on both the Risk Premium and DCF approaches. Giving both the Risk Premium and DCF approaches equal weight, the indicated cost of equity for both Barometer Groups is 13.68% $(14.6\% + 12.75\% = 27.35\% \div 2 = 13.675\%, \text{ rounded to } 13.68\%)$.

I should note that my recommendation in this case does not include an adjustment to account for flotation costs. Even in the situation where a company will not issue common stock through a public offering during the near-term, an adjustment should be considered because a utility must be in a competitive capital attraction position at all times to

1 fulfill its public service obligation. To deny recognition of flotation
2 costs would be discriminatory when other public utilities receive an
3 allowance in this regard. At this time, however, I have not included a
4 specific flotation cost allowance in my cost of equity recommendation
5 because the Board traditionally does not incorporate this factor into
6 its rate of return findings unless a new common stock sale is imminent.

7 When viewing my equity cost rate recommendation, it should be rec-
8 ognized that I have made no specific provision for the prospect that the
9 rate of return may not be achieved due to unreflected expense increases
10 and/or unforeseen events. It is my understanding that the Company has
11 adopted the 13.68% rate of return on common equity in computing its cost
12 of service. In my opinion, a 13.68% rate of return on common equity is
13 reasonable for Midwest Gas, keeping in mind that the cost of capital
14 allowed by the Board in the Company's rates merely represents an oppor-
15 tunity for the Company to achieve a particular level of earnings.

16 Recommended Overall Rate of Return

17 Q. What do you recommend the Board approve as the appropriate overall fair
18 rate of return for the Company?

19 A. Midwest Gas should be provided an opportunity to earn a 10.702% overall
20 fair rate of return applicable to the Company's rate base. This rate of
21 return is shown on Schedule 15 and is based on the capital structure
22 ratios and the capital cost rates recommended by Mr. Mussehl.

23 Q. Have you sought to test the reasonableness of your overall rate of re-
24 turn recommendation?

DIRECT TESTIMONY OF PAUL R. MOUL

1 A. Coverage is a test which reveals the level of protection that the utili-
2 ty can supply for its fixed obligations. Interest coverage is measured
3 on both a before- and after-income tax basis. Normally, before-income
4 tax interest coverage is used for the purpose of a company's indenture
5 earnings test, and overall coverage of interest charges and preferred
6 dividends on an after-income tax basis is the measure employed with re-
7 gard to preferred stock.

8 The IPS indenture restricts the issuance of additional funded in-
9 debtedness unless income available for interest charges on a before-
10 income tax basis is at least two times interest charges on debt present-
11 ly outstanding and debt to be issued. The IPS charter restricts the
12 issuance of additional preferred stock unless gross income after taxes
13 for the payment of interest is at least one and one-half times interest
14 charges and preferred stock dividends on outstanding preferred stock and
15 preferred stock to be issued. While the terms of the indenture and
16 charter provide minimum levels of coverage that must be demonstrated
17 before new senior securities may be issued, those terms cannot be relied
18 upon as the level of coverage necessary to attract capital on a reasona-
19 ble basis in today's capital markets. Indeed, it should be noted that
20 these minimum requirements are merely for the protection of existing
21 senior capital security holders and are not intended to reflect an ap-
22 propriate capital attraction standard.

23 Another important factor that influences coverage, aside from the
24 creditor support provided by the return on equity, relates to the income
25 tax provision reflected in the cost of service. After the passage of



RAY E. BRANSTAD, GOVERNOR

MidAmerican Exhibit 8.1

Page 393 of 654

IOWA UTILITIES BOARD
DEPARTMENT OF COMMERCE

MIDWEST GAS, A DIVISION OF
IOWA PUBLIC SERVICE COMPANY

Docket No. RPU-90-6

"ORDER GRANTING JOINT MOTION FOR APPROVAL OF SETTLEMENT AGREEMENT"

Issued January 14, 1991

Parties Served:

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James R. Maret
Consumer Advocate
Department of Justice
Consumer Advocate Division
Lucas State Office Building
Des Moines, IA 50319

CERTIFICATE OF SERVICE

The undersigned hereby certifies that
the foregoing document has been served
this day upon all parties of record in this
proceeding by mailing, by first class mail,
to each such party a copy thereof, in
properly addressed envelope with charges
prepaid.

Date: 01-14-91

Walter Ladd

STATE OF IOWA
DEPARTMENT OF COMMERCE
UTILITIES DIVISION

IN RE:

MIDWEST GAS, A DIVISION OF IOWA
PUBLIC SERVICE COMPANY

)
)
) DOCKET NO. RPU-90-6
)
)

ORDER GRANTING JOINT MOTION FOR APPROVAL OF SETTLEMENT AGREEMENT

(Issued January 14 , 1991)

On August 15, 1990, Midwest Gas, a division of Iowa Public Service Company (Midwest Gas), filed natural gas tariffs, identified as TF-90-277 and TF-90-278. In TF-90-277, Midwest Gas proposed a temporary increase which would produce additional revenue of approximately \$4,997,874. In TF-90-278, Midwest Gas proposed a permanent increase which would produce additional revenue of approximately \$14,580,000, or 6.7 percent, over current revenues. On September 14, 1990, the Utilities Board (Board) issued an order docketing the proposed increase as a formal proceeding and granting intervention to Mid-Size Energy Group, Inc. (Mid-Size). On September 26, 1990, the Board granted intervention to Northern Natural Gas Company, a division of Enron (Northern), and on November 9, 1990, the Board issued an order setting temporary rates. The Board granted intervention to Natural Gas Pipeline Company of America (Natural) on November 29, 1990.

On December 18, 1990, the Board granted a joint motion to suspend the procedural schedule filed by all of the parties to the proceeding, Consumer Advocate Division of the Department of Justice (Consumer Advocate), Midwest Gas, Mid-Size, Northern, and Natural. On December 21, 1990, the parties filed a "Joint Motion for Approval of Settlement Agreement." The parties

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Page 2

attached a document identified as "Settlement Agreement," which was signed by all parties to the proceeding. A copy of the settlement is attached and incorporated by this reference. On January 9, 1991, the parties filed a "Response to Staff Memorandum."

The Board has reviewed the settlement agreement, attached schedules, and the clarification provided in "Response to Staff Memorandum" and will grant the parties' motion for approval of settlement. According to the parties, all classes of customers, industrial energy users, and natural gas pipeline suppliers have been actively represented. All the parties agree the terms of the settlement are just and reasonable and consistent with Iowa law.

The settlement resolves all issues involving revenue requirement and rate design and allows an increase for Iowa customers of \$6,764,101, or 3.1 percent over test year revenues. In addition, the purchased gas adjustment clause applicable to customers served by Northern will be increased by \$516,058 to reflect the inclusion of costs associated with the liquefaction of natural gas. The settlement is based on a 10.009 percent rate of return. In addition to the elements set out in Schedules A-C attached to the settlement agreement, the parties specifically agree to certain elements of rate design in Schedule D. A class cost-of-service study prepared by Midwest Gas witness Loos incorporates a class cost-of-service study filed in the record of this proceeding which incorporates the changes of the settlement agreement. The test period used to determine rates is determined on the basis of an annual revenue requirement based on a test year ending December 31, 1989. The rate base, net operating income used to

Docket No. RPU-90-6
Page 3

determine the test year revenue deficiency, the overall weighted cost of capital used to calculate the annual revenue requirement, the total annual revenue requirement, and total company allocations are set forth in Schedules A-C attached to the settlement agreement.

After reviewing the complete record in this proceeding, pursuant to IOWA ADMIN. CODE 199-7.2(11) (1991), the Board finds the terms of the parties' agreement to be reasonable. There are no aspects of the settlement agreement which are inconsistent with Iowa law or the rules of the Board. In addition, the terms of the settlement agreement are in the public interest. In light of the complete record in this proceeding, the Board finds the settlement agreement to be reasonable and it will be approved. Pursuant to IOWA ADMIN. CODE 199-7.2(11) (1991), this constitutes the Board's final decision on the issues addressed in the settlement.

CONCLUSIONS OF LAW

The Utilities Board has jurisdiction over the parties and subject matter of this proceeding, pursuant to IOWA CODE §§ 476.1 and 476.3 (1989).

FINDINGS OF FACT

1. The proposed settlement is reasonable in light of the complete record in this proceeding.
2. The proposed settlement is in the public interest.

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Page 4

ORDERING CLAUSES

IT IS THEREFORE ORDERED:

1. The "Motion for Approval of Settlement Agreement," filed by the Consumer Advocate Division of the Department of Justice, Midwest Gas, a division of Iowa Public Service Company, Mid-Size Energy Group, Inc., Northern Natural Gas Company, and Natural Gas Pipeline Company of America on December 21, 1990, is granted.

2. On or before 45 days from the date of this order, Midwest Gas, a division of Iowa Public Service Company, shall file tariffs to implement the terms of the "Settlement Agreement" filed by the parties on December 21, 1990, and attached to this order.

3. Motions and objections not previously granted or sustained are denied or overruled.

UTILITIES BOARD

Armin J. Nagel
Paul J. [Signature]

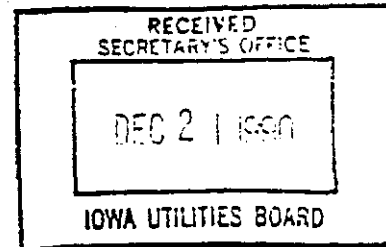
ATTEST:

Geri E. Tolson
Executive Secretary, Assistant to

Nancy G. [Signature]

Dated at Des Moines, Iowa, this 14th day of January, 1991.

STATE OF IOWA
DEPARTMENT OF COMMERCE
UTILITIES DIVISION



IN RE:)
) DOCKET NO. RPU-90-6
MIDWEST GAS, A DIVISION OF)
IOWA PUBLIC SERVICE COMPANY)

SETTLEMENT AGREEMENT

ARTICLE I

Introduction

On August 15, 1990 Midwest Gas ("Midwest Gas"), a division of Iowa Public Service Company, filed with the Iowa State Utilities Board ("Board") revised natural gas tariffs, identified as TF-90-277 and 90-278, proposed to become effective September 14, 1990, which would increase Midwest Gas's annual natural gas operating revenues by about \$14,600,000 on an Iowa jurisdictional basis. The Office of Consumer Advocate ("OCA") entered its appearance on September 4, 1990 and filed an Objection to Interim Rates on September 14, 1990. The Mid-Size Energy Group, Inc. requested to intervene in this proceeding on September 7, 1990 and was granted intervenor status on September 14, 1990. Northern Natural Gas Company and Natural Gas Pipeline Company of America requested to intervene on September 26, 1990 and November 2, 1990, respectively, and were granted intervenor status on October 10, 1990 and November 29, 1990, respectively. By order issued September 14, 1990, the Board docketed the case as a

formal proceeding, instituted an investigation of the reasonableness of the proposed rate increase, and established a procedural schedule. A consumer comment hearing was held in Des Moines, Iowa.

Midwest Gas was authorized to collect increased rates on an interim basis commencing November 9, 1990 and as modified on December 6, 1990, pending hearing and decision.

If approved, this Agreement would allow an increase in rates for Iowa customers of \$6,764,101 or 3.1% over booked test year revenues. The purchased gas adjustment clause applicable to customers served by Northern Natural Gas Pipeline Company would be increased by \$516,058 annually to reflect the inclusion of costs associated with the liquefaction of natural gas which have historically been recovered as part of Midwest Gas's non-gas rates.

ARTICLE II

Purpose

This Agreement has been prepared and executed by the signatories for the sole purpose of resolving specific issues in Docket No. RPU-90-6, and is applicable to final rates in that proceeding only. In consideration of the mutual agreement hereinafter set forth, the signatories hereby agree as follows.

ARTICLE III

Joint Motion

Upon execution of this Agreement, the signatories shall file this Agreement with the Board together with a joint motion

requesting that the Board issue an order approving this Agreement in its entirety without condition or modification.

ARTICLE IV

Condition Precedent

This Agreement shall not become effective unless and until the Board enters an order approving this Agreement in its entirety without condition or modification.

ARTICLE V

Privilege and Limitation

This Agreement is made pursuant to Iowa Code §17A.10 (1989), 199 I.A.C.7.7(4) and 199 I.A.C.7.2(11), and shall become binding upon the signatories upon its execution, provided, however, that if this Agreement does not become effective in accordance with Article IV, above, it shall be null, void and privileged. This Agreement is intended to relate only to the specific matters referred to herein; no signatory waives any claim or right which it may otherwise have with respect to any matter not expressly provided for herein; no signatory shall be deemed to have approved, accepted, agreed or consented to any ratemaking principle, any method of cost of service determination, or any method of cost allocation underlying the provisions of this Agreement (or the Schedules attached hereto) or be prejudiced or bound thereby in any other current or future proceeding before the Board. No signatory shall directly or indirectly refer as precedent to this Agreement or that part of any order of the

Board referring to this Agreement in any other current or future Company rate proceeding before the Board.

ARTICLE VI

Test Period

The justness and reasonableness of rates in this case shall be determined on the basis of an annual revenue requirement determined on the basis of a test year ending December 31, 1989, utilizing actual test year operating results which shall not be adjusted, annualized, or normalized except as hereinafter provided.

ARTICLE VII

Costs of Providing Utility Service

The rate base to be used to determine the annual revenue requirement, the net operating income to be used in determining the test year revenue deficiency, the allowable overall weighted cost of capital used to calculate the annual revenue requirement, the total annual revenue requirement and total company Iowa and non-jurisdictional allocations are as set forth on Schedules A through C appended to this Agreement.

ARTICLE VIII

Rate Design

The signatories agree upon the design of rates and tariffs for Iowa jurisdictional customers as specified on Schedule D to this Agreement.

ARTICLE IX

Reserved for Future Litigation

The Parties explicitly reserve for future litigation the questions of:

- a. The method by which Midwest Gas will recover any unrecovered manufactured gas plant cleanup costs; and
- b. The reasonableness of allowing Midwest Gas a return on and return of its investment in an acquisition adjustment.

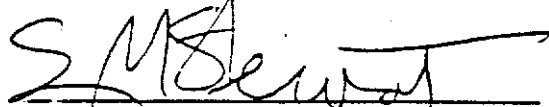
ARTICLE X

Timeliness of Approval

In entering into this settlement, the signatories have contemplated that this agreement would be approved by the Board as expeditiously as reasonably possible so that tariffs incorporating its terms could be implemented as early as possible.

Respectfully submitted,


MIDWEST GAS, a division of
IOWA PUBLIC SERVICE COMPANY



Susan M. Stewart
Senior Attorney
401 Douglas St.
P.O. Box 778
Sioux City, Iowa 51102

DATED this 18th day of
December, 1990

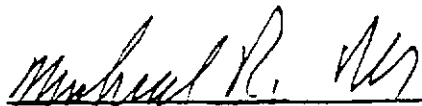
OFFICE OF CONSUMER ADVOCATE



Alexis K. Wodtke
Attorney
Lucas State Office Building
Des Moines, IA 50319
Telephone: (515) 281-5984

DATED this 19th day of
December, 1990

MID-SIZE ENERGY GROUP, INC.




Michael R. May, Attorney
Suite 935 - Two Rian Center
601 Locust Street
Des Moines, Iowa 50309
Telephone: (515) 245-3757

DATED this 20th day of
December, 1990

NORTHERN NATURAL GAS COMPANY

Steven J. Kean, Senior Counsel
Northern Natural Gas Company
2223 Dodge Street
Omaha, Nebraska 68102
Telephone: (402) 633-4128

DATED this day of
December, 1990

NATURAL GAS PIPELINE COMPANY
OF AMERICA

Paul W. Mallory
Natural Gas Pipeline Company of America
701 East 22nd Street
Lombard, Illinois 60148
Telephone: (708) 691-2760

DATED this 18th day of
December, 1990

MID-SIZE ENERGY GROUP, INC.

Michael R. May, Attorney
Suite 935 - Two Ruan Center
601 Locust Street
Des Moines, Iowa 50309
Telephone: (515) 245-3757

DATED this ____ day of
December, 1990

NATURAL GAS PIPELINE COMPANY
OF AMERICA

Paul W. Mallory
Natural Gas Pipeline Company of America
701 East 22nd Street
Lombard, Illinois 60148
Telephone: (708) 691-2760

DATED this ____ day of
December, 1990

NORTHERN NATURAL GAS COMPANY

Steven J. Kean
Steven J. Kean, Senior Counsel
Northern Natural Gas Company
2223 Dodge Street
Omaha, Nebraska 68102
Telephone: (402) 633-4128

DATED this 2/5 day of
December, 1990

MIDWEST GAS
DOCKET NO. RPU-90-6
TEST YEAR ENDING 12/31/89
REVENUE REQUIREMENT

SCHEDULE A
FINAL RATES

LINE NO.	DESCRIPTION	(A) AMOUNT
1	RATE BASE	\$198,170,561
2	RATE OF RETURN	10.009%
3	REQUIRED RETURN	\$19,834,891
4	LESS: ADJUSTED OPERATING INCOME	14,417,468
5	NET OPERATING INCOME DEFICIENCY	\$5,417,423
6	FEDERAL INCOME TAXES	2,790,567
7	STATE INCOME TAXES	938,129
8	REVENUE DEFICIENCY	\$9,146,119
9	NON-JURISDICTIONAL REVENUE DEFICIENCY	2,382,018
10	JURISDICTIONAL REVENUE DEFICIENCY	\$6,764,101

Mid Gas
 Fe - Ended December 31, 1989
 Re der Proposed Rates

Exhibit (LWL-3)
 Table 1
 Page 1 of 1
 12-Dec-90
 03:33 PM

Line No.	Acct. No.	Description	Adjusted Total Company	Iowa	Non-juris-dictional	Basis of Allocation or Reference
			\$	\$	\$	
1		Return Under Proposed Rates				
2		Return Under Existing Rates	14,417,468	11,818,764	2,598,704	L 21 T 2
3		Rate Base	198,170,561	158,149,671	40,020,890	L 33 T 4
4		Proposed Rate of Return	10.009%	10.009%	10.009%	
5		Return Under Proposed Rates	19,834,391	15,829,201	4,005,190	L 3 I L 4
6		Incremental Return	5,417,423	4,010,436	1,406,987	L 5 - L 2
7		Incremental Income Taxes				
8		State				
		Effective Tax Rate		10.17%		
		Incremental Taxes	938,129	687,909	250,220	L 6 I L 9 / (1 - L 9 - L 12)
		Federal				
		Effective Tax Rate		30.54%		
13		Incremental Taxes	2,790,567	2,065,757	724,810	L 6 I L 12 / (1 - L 9 - L 12)
14		Proposed Revenue Increase	9,146,120	6,764,102	2,382,018	L 6 + L 10 + L 13

MIDWEST GAS
DOCKET NO. RPU-90-6
TEST YEAR ENDING 12/31/89
RATE BASE

SCHEDULE B
FINAL RATES

LINE NO.	ITEM	(A) AMOUNT
1	UTILITY PLANT IN SERVICE	\$343,313,997
2	LESS: ACCUM. DEPR.	\$120,045,964
3	NET UTILITY PLANT	\$223,268,033
	LESS:	
4	DEFERRED INCOME TAXES	\$25,593,670
5	ITC 3%	\$231,693
6	CUSTOMER ADVANCES	\$1,923,445
7	CUSTOMER DEPOSITS	\$1,423,472
8	UNCOLLECTIBLE ACCOUNTS	\$1,050,461
9	INJURIES & DAMAGES	\$382,690
10	MISC. OPERATING PROVISIONS	\$152,404
11	TOTAL DEDUCTIONS	\$30,757,835
	PLUS: WORKING CAPITAL	
12	CASH WORKING CAPITAL	(\$5,094,799)
13	MATERIALS & SUPPLIES	\$2,827,768
14	PREPAYMENTS	\$2,645,374
15	FUEL STOCKS	\$5,282,020
16	TOTAL WORKING CAPITAL	\$5,660,363
17	TOTAL RATE BASE	\$198,170,561

MIDWEST GAS
DOCKET NO. RPU-90-6
TEST YEAR ENDING 12/31/89
INCOME STATEMENT

SCHEDULE C
FINAL RATES

	ITEM	TOTAL COMPANY AMOUNT (A)
1	OPERATING REVENUE	\$286,865,748
	OPERATING EXPENSES :	
2	NNG PURCHASED GAS	\$177,673,346
3	ANR PURCHASED GAS	\$2,705,609
4	NGPL PURCHASED GAS	\$11,189,869
5	VIKING PURCHASED GAS	\$742,912
6	OTHER PURCHASED GAS	
7	UNION LABOR	\$12,750,070
8	OFFICE LABOR	\$14,816,507
9	OTHER O & M	\$22,048,948
10	DEPRECIATION	\$10,254,999
11	OTHER TAXES	\$10,780,231
12	FEDERAL INCOME TAXES	\$4,622,312
13	STATE INCOME TAXES	\$1,709,427
14	DEFERRED INCOME TAXES	(\$1,538,961)
15	INVESTMENT TAX CREDIT	(\$724,412)
16	TOTAL EXPENSES	\$267,030,857
17	OPERATING INCOME	\$19,834,891

Rate Design

SCHEDULE D

1. Midwest Gas agrees to withdraw its request for approval of the Optional Electric Generation Service tariff, the Flexible Transportation rate tariff and the Iowa Environmental Protection Tariff and will not implement these tariffs at this time.
2. Midwest Gas agrees to withdraw the Transmission Access surcharge for transportation customers proposed at 5¢ per MMTBtu. The costs of the Natural Gas Pipeline interconnection will be allocated to all transportation and system supply customers in the same manner that other distribution costs are allocated in the class cost of service study prepared by L. W. Loos and filed in this proceeding.
3. There will be no consolidation of purchased gas adjustment clauses of the separate natural gas pipeline suppliers serving Midwest Gas.
4. The per meter service charge for customers receiving service under the Small Volume Firm Rate (SF1) shall be \$8.75 per month. The remainder of the customer costs shall be recovered in the per therm charge over the first 250 therms of monthly usage.
5. The commodity charge per therm for large volume interruptible gas service shall be 14.93¢ per MMBtu.
6. The monthly customer charge applicable to FTS and ITS Transportation Service is \$250 per month per delivery point.
7. The commodity charge applicable to gas transported under the FTS and ITS Transportation Service Tariffs shall be 15.93¢ per MMBtu with a credit of \$0.01 per MMBtu if the customer declines System Supply Standby Service.
8. Midwest Gas's proposal to remove costs associated with the liquefaction of natural gas from the revenue requirement and include them in the applicable purchased gas adjustment clause shall be implemented.
9. In all respects not set forth herein, with the exception of the allocation of manufactured gas plant cleanup costs, the stipulated revenue requirement shall be allocated by jurisdiction and customer class in accordance with the class cost of service study presented by Midwest Gas witness L. W. Loos and the tariff provisions shall be implemented as proposed by Midwest Gas.

DOCKET NOS. RPU-80-19 and RPU-80-29

STATE OF IOWA

IOWA STATE COMMERCE COMMISSION

v:

ILLINOIS GAS AND ELECTRIC COMPANY)

DOCKET NOS. RPU-80-19

AND RPU-80-29

DECISION AND ORDER

(Issued November 6 , 1981)

APPEARANCES:

EDWARD J. HARTMAN, General Counsel, Iowa-Illinois Gas and Electric Company, 206 East 2nd Street, Davenport, Iowa 52808, appearing on behalf of Iowa-Illinois Gas and Electric Company.

LEO J. STEFFEN and DIANE L. MCINTIRE, Office of Commerce Counsel, Lucas State Office Building, Des Moines, Iowa 50319, appearing on behalf of the Staff of the Iowa State Commerce Commission.

WILLIAM F. SUEPPEL, Attorney, Meardon, Sueppel, Downer & Hayes, 122 South Linn Street, Iowa City, Iowa 52240, appearing on behalf of the League of Iowa Municipalities.

RICHARD H. REHMAN, President, Metropolitan Housing Association, Ltd., 2505 Brookland Drive, N.E., Cedar Rapids, Iowa 52402, appearing on behalf of Metropolitan Housing Association, Ltd.

I. PROCEDURAL HISTORY

On May 1, 1980, Iowa-Illinois Gas and Electric Company (Company) filed the Commission a proposed gas rate increase, identified as TF-80-184 and billing approximately \$7,400,000 or 5.2 percent, effective June 1, 1980. proposed rates were suspended on May 30, 1980, by a Commission order which instituted a formal investigation, pursuant to Section 476.6, The Code 1979.

VII. RATE OF RETURN

A. Capital structure.

Before examining arguments as to a fair rate of return on equity, we must resolve the issue of whether end-of-period or average capitalization should be utilized to determine revenue requirements. Company asks the Commission to utilize end-of-period capitalization which it believes will give a more accurate picture of current costs of capital. May 31, 1980 capitalization costs are known and measurable, and are higher than costs established by Staff using average capitalization: embedded long-term interest rates were 7.62 percent at May 31, as compared to the average (7.46 percent) during the twelve months ending May 31; the embedded rate for both preferred (5.98 percent) and preference (10.58 percent) stock was, on May 31, 9.60 percent, as compared to the average rate of preferred stock (9.04 percent) during the twelve months ending May 31. The Commission should recognize, Company argues, that these costs are rising as new issues are made at higher rates: preference shares with a dividend rate of 10-1/4 percent were issued in February of 1981; First Mortgage Bonds were issued at an interest rate of 13-3/4 percent in March of 1981. Use of year-old embedded capital costs would constitute "unconscionable regulatory lag," and, Company argues, those costs are not representative of capitalization during the period when the proposed rates will be collected, and would require Company to return to the Commission much sooner for additional rate relief.

Staff responds that use of end-of-period capitalization would involve speculative adjustments and would contravene the Commission's traditional practice of matching income to be generated by the proposed rates with the investment producing the income. Use of end-of-period capitalization is also

"not in accord with business world reality," Staff says, since investors are accustomed to receiving earnings reports based on averages and would be misled by data which, based on end-of-period capitalization, would understate the relation of income to capital invested.

We have not been presented with any justification for a departure from traditional ratemaking principles. Company has provided us with evidence that some capital costs have risen and then rests its case. We have adopted use of an average capital structure in recognition of the multitude of factors, including changing economic conditions, which may affect a utility company's ability to earn a fair rate of return. Any change in traditional ratemaking principles should be approached carefully and with full consideration of the effect on ratepayers and investors that such a change would produce. Company has failed to supply us with an adequate record on which a change to end-of-period capitalization could be justified.

We will therefore utilize the average capital structure proposed by Staff, with preferred and preference stock representing 15.5 percent of the total capital structure, long-term debt representing 47.4 percent of the total capital structure and common equity representing 37.1 percent of the total capital structure.

B. Return on common equity.

Company offered the testimony of two witnesses in support of its request that return on common equity be established between 16 percent and 16.8 percent. Donald H. Shaw, Vice President-Finance, explained Company's need to maintain a flexible capital structure and to generate sufficient revenue to meet inflation and finance construction. Mr. Shaw stated Company has more planned construction

Docket Nos. RPU-80-19
and RPU-80-29

Page 30

than other utility companies. Mr. Shaw also noted investors are becoming less willing to buy utility stock and investor confidence must be restored to procure needed plant financing.

Certain coverage ratios are preconditions to issuance of bonds, debentures and preferred shares, Mr. Shaw testified, and Company must maintain a minimum after-tax coverage ratio of at least 2.75 (which he said required a 16 percent rate of return on common equity) to retain the flexibility in the choice of financing and to maintain confidence in Company's securities. By adjusting book value of common equity for inflation occurring since 1941 and applying to that calculation a rate of return derived from a pure interest factor and investment risk, with no inflationary allowance, Mr. Shaw arrived at a fair rate of return of 16 percent. This 16 percent figure is not inconsistent with the rate determined by his application of discounted cash flow (DCF) methodology (16.2 percent).

Staff points out that Mr. Shaw's minimum after-tax coverage ratio of 2.75 to 3 exceeds any of Company's indenture requirements and argues that it has no relevance in determining the cost of common equity. The derivation of a rate of return designed to compensate investors for past inflation is similarly mistaken, Staff argues, and has been rejected by the Commission; investors would be compensated twice for inflation, since the cost of equity reflects investors' expectations concerning inflation. Finally, Staff argues that Mr. Shaw's DCF calculations are methodologically invalid and contain arbitrarily selected numbers. Staff's modifications of errors it sees in Mr. Shaw's calculations produce a return on equity of 14.7 percent.

Company's other witness, Dr. Robert M. Soldofsky, Professor of Finance at the University of Iowa, also offered testimony as to fair rate of return on

Company's equity. Dr. Soldofsky introduced variations on the discounted cash flow (DCF) model, which measures the rate of return necessary to maintain and attract equity capital. The model is expressed as:

$$R_e = \frac{D}{P} + g; \quad \frac{\text{dividends per share}}{\text{price per share}} + \text{expected growth rate in dividends}$$

Dr. Soldofsky criticized the DCF model for failing to take risk into account and for producing an unrealistically low rate of return. DCF, he said, assumes that dividend growth per share, earnings per share, market price and book value per share grow at the same rate, and that book value and market price are identical "from everlasting to everlasting." The rate of return projected by use of the DCF model (13.8% to 15.1%) is so low as to be "abhorrent to investors." He offered several alternative methods of calculation of the rate of return for comparison and to illustrate his argument that reliance should not be placed on a single methodology.

Staff argues that none of these adjustments to the DCF model need to be made. Dr. Soldofsky's assertion that the DCF model assumes a riskless state is incorrect. The investors setting the market price evaluate the risks and expected returns inherent in a security purchase. The estimated growth rate takes into account the possibility of variable dividends, and, so long as it is accurately estimated, takes into account varying growth rates. Errors are reduced by the use of constant costs of capital and a constant growth rate. In short, the DCF model accurately portrays investor expectations through the examination of historical information and predicts a rate of return requirement to maintain financial integrity, attract capital and compensate investors for the risks assumed.

Dr. Soldofsky's adjustments to the DCF model are discussed below along with Staff's comments on those adjustments.

1. Limited horizon discounted cash flow.

Dr. Soldofsky characterized the growth rate as the product of the percentage of earnings reinvested in the business and the expected return on that investment. In 1979, the growth rate was 4.2 percent (31 percent retained earnings multiplied by 13.5 percent earnings on net worth), which is in accord with Value Line's estimate of Company's growth rate (4-6 percent). Rather than applying the traditional DCF model, Dr. Soldofsky adopted a six-year horizon to project utility dividends and determined that the rate of return on common stock must be between 15.34 percent and 18.91 percent to maintain Company's capital integrity.

Staff argues this approach does not correct Dr. Soldofsky's perceived shortcomings in the DCF model. Dr. Soldofsky introduces no support for his claim that a six-year horizon gives an accurate dividend projection and the rates of return he projects as reasonable are based on several assumptions: assumed dividends, assumed initial price and assumed future price. The methodology fails to take into account the interrelationship between anticipated dividends and sales price and confuses long and short-term growth potential. Calculation of the growth rate also fails to take into account the plowback ratio (in Company's case, averaging 3.5 percent) and is based on incorrect values for the 1979 return, and the retention rate; with these corrections, Company's growth rate, by Dr. Soldofsky's formula, is between 2.8 percent to 4 percent.

2. Standard DCF plus allowance for change in the P/E ratio.

Dr. Soldofsky stated the element of risk could be added to the standard DCF calculation by examining Value Line's dividend yields, dividend growth rates and range of anticipated change in the price/earnings ratios of the 30